

WRITTEN OPINION OF THE INTERNATIONAL SEARCH AUTHORITY  
(ADDENDUM)

International Application No. PCT/DE2004/000444

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Item V

Reasoned statement with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: EP 1 239 370 A;

D2: EP 0 995 646 A.

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of Claim 1 is not based on an inventive step as defined in Article 33(3).

Document D1 is regarded as the closest prior art with respect to the subject matter of Claim 1. It discloses (see §9 through §15, Figs.) (indications in parentheses refer to this document): a control unit 1 for a restraint system 6, which unit is configured such that the control unit 1 can fire connected pyrotechnic firing elements 5, sensor values for a safety module 2 being emulated such that the safety module 2 enables the firing circuits 5.

The subject matter of Claim 1 therefore differs from the known control unit in that the control unit receives, via an interface, a software element which is configured such that as a function of the software element all the firing circuits, and the triggering algorithm for firing all the firing circuits, are configured.

The object to be achieved with the present invention can thus be regarded as that of making possible a disposal firing.

The solution proposed in Claim 1 of the present application cannot be considered inventive (PCT Article 33(3)) for the following reasons:

For the same purpose in the context of a similar control unit, D2 (see §1 through §10) discloses that the control unit receives via a bus interface a software element (code signal) which is configured such that as a function of the software element all the firing circuits, and the triggering algorithm for firing all the firing circuits, are configured. In order to follow this teaching and actually trigger the firing circuits 5, one skilled in the art knows that he must bypass the safety module 4 that constitutes a hardware-based redundant check of the sensor values. For that purpose he would self-evidently have recourse to the solution already available in D1, i.e. would emulate the sensor values. He would thereby, without inventive action, arrive at a control unit in accordance with Claim 1.

The dependent Claims 2 through 8 contain no features that, in combination with the features of any claim to which they refer, meet the requirements of the PCT in terms of inventive step. The reasons for this are the following:

The feature of dependent Claim 2 or 3 involves merely one of several obvious possibilities from which one skilled in the art would select in accordance with circumstances, without inventive action, in order to implement the interface known from D2.

D1 also discloses the additional features of the independent claims:

4 (see §13), specifically that a processor 1 in the control unit 7 is connected via a bus to the safety module 4 and to a sensor module 3 and an interface module 2 for the connection of an external sensor 3, the processor 1 emulating the sensor values on the bus;

5 (see §12, 13, Fig. 12), specifically that the bus is an SPI bus, the processor 1 being the master and being configured in that the processor 1 transfers the emulated sensor values via the MISO line;

6 (see §12, 13, Fig. 12), specifically that the MISO line is connected to an I/O port of the processor 1 for transfer of the sensor values.

The incorporation into the triggering algorithm of a boot loader software program according to Claim 7 is, for one skilled in the art, a usual design action for production of a control unit.

The incorporation of a reset switch according to Claim 8 is likewise, for one skilled in the art, a usual design action for production of a control unit.